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Brian L. Mitchell
Director

PUBLIC MEETING MINUTES

Name of Organization: Computer Science Subcommittee
Date and Time of Meeting: Wednesday, July 15, 2020 at 2:00 pm
Place of Meeting: Nevada State Library and Archives
Governor's Office of Science Innovation and Technology
100 North Stewart Street, Suite 220
Carson City, NV 89701

Join Zoom Meeting:

<https://us02web.zoom.us/j/82837160199?pwd=Nk0rendWVENWElBJU1NKS0daS3Eydz09>

Meeting ID: 828 3716 0199

Password: 766906

1. Call to Order / Roll Call

Chair Mark Newburn

The Computer Science Subcommittee was called to order by Chair Mark Newburn at 2:08 P.M. on Wednesday, July 15, 2020, on the above ZOOM Meeting.

Members Present

Andreas Stefik
Cindi Chang
Dave Brancamp
Jaci McCune
Kimberly DeLemos
Mark Newburn
Melissa Scott
Robert Quinn

Members Absent

Glenn Krieger
Heather Crawford-Ferre
Irene Waltz
Jonathan Reynolds
Kindra Fox
Pavel Solin
Rob Sidford

Staff Present

Brian Mitchell
Tracey Gaffney
Debra Petrelli

A quorum was declared

2. **Public Comment** (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)

Chair Mark Newburn

There was no public comment.

3. **Welcoming Remarks and Announcements**

Chair Mark Newburn

Chair Newburn welcomed everyone to the meeting and wished everyone good health during the COVID-19 pandemic. He commented how difficult this year has been on education and it now appears Nevada is moving to a distance learning model. He commented on how many teachers have no training for this, no curriculum and many students don't have the necessary devices.

4. **Approval of the Minutes from the December 19, 2019 Meeting** (For possible action)

Chair Mark Newburn

Chair Newburn asked if there are any changes or corrections to the December 19, 2019 Minutes as written. None were made. Chair Newburn asked for a motion. Ms. DeLemos made a motion to approve the December 19, 2019 Minutes as written. Dr. Stefik seconded the motion. The motion passed unanimously.

5. **Discussion on the ECEP Grant and Possible COVID-19-Related Changes** (For possible action)

Chair Mark Newburn

Cindi Chang

Ms. Chang pointed out that before COVID-19 the subcommittee had received an Expanding Computer Education Pathways (ECEP) Mini Grant for the Nevada Computer Science Education Equity and Diversity Convening. She commented that back in 2017, based on SB200, the law now states that all high schools must offer computer science by 2022 and increase enrollment of students with disabilities, female students and underrepresented groups. She added to be pro-active, the subcommittee decided to apply for this grant to gather experts from throughout the nation, bring them together, have them come up with a plan on how to put a guide together to support our administrators prior to 2022 on how to actually implement computer science and what it looks like.

She said it would also include training, specifically to those administrators on this plan. She said now, post-COVID-19, everything has been pushed back. She added that originally all the required signatures had been received from ECEP, as well as the State of Nevada, and everything was in place. She commented if you look at the budget breakdown, it included travel costs, which will now warrant a discussion, as well as the "Timeline of Milestones/Activities." She pointed out that prior to COVID-19, work had started in late January and early February 2020, which included a buildout of Google forms to reach out to administrators, and a list of beneficial individuals from our communities to bring to the convening had been put together. She said instead of having

the convening on June 8th and 9th, it has not yet taken place. She asked whether Mr. Mitchell knew how liberal ECEP would be with the State to move these dates, and suggested a reevaluation of what this looks like and build a team that can actually move forward. Mr. Mitchell responded that before COVID-19, it took some time to negotiate this contract language with ECEP. He said the dates had been changed to not actually start until June 1, 2020, even though the paperwork was not completed until Mid-June and to his knowledge the State of Nevada has not yet received this funding. He said he believes ECEP understands when it comes to the dates and timelines based on the onset of COVID-19, and the amount of time it took to finalize the grant, that it would be perfectly reasonable to come up with a new plan to accomplish the same goals though different means. He said his goal today is to re-socialize the original intent of the grant and discuss an alternative means of getting there with the same outcome, put it on paper and submit it back to ECEP as a modification to the milestones, timeline and if necessary, the grant. He said he believes ECEP will be looking for something specific from what was submitted and still arriving at the same outcome.

Ms. Chang pointed out that a full application is not required, but rather the submission of an addendum or paragraph explaining what is needed to be done. Mr. Mitchell agreed it could be informal. He added that he believes ECEP is more interested in the deliverables and as long as the path to getting there is not unreasonable. Ms. Chang said she is currently unclear on how much time the grant is giving the State to complete these deliverables. Mr. Mitchell commented that as he understands it, the date to complete all spending is June 2021, and said he will verify that information. Ms. Scott suggested having a phone call with ECEP to discuss further what the amendment should look like by adding the new timeline. Mr. Mitchell agreed and said he would prefer to know where the group stands on these topics prior to a phone call with ECEP.

Ms. Chang commented that in the past, the subcommittee put together mini-taskforce groups to build on these types of topics and asked for volunteers to take part in a new taskforce to assist in addressing these changes and assist in preparing new documents, taking the lead on the convening, and moving forward. She said by her working with a taskforce of at least three additional people, they will have that diverse voice that has become more important than ever. She pointed out that equity, especially with computer science and digital divide has now risen to the top of Nevada's needs. She said the timing and the topic had been perfect with the original plan of the grant, but now moving on, this is all timely information for our state. She pointed out that ECEP is very excited to see what comes out of this grant because they will be using Nevada as a model for other states. Ms. Scott offered assistance with the budget and amendment piece.

Chair Newburn asked whether there was still a plan for an actual convening or a virtual convening. Ms. Chang said she is leaning towards the virtual convening because of the greater access to community leaders in this area. She said virtual would have more participants than in the past because of scheduling and travel. She added that even after COVID-19 and its repercussions, travel budgets will be strapped and some people may not be allowed to travel. Ms. DeLemos suggested if the convening is expected to commence in late 2020 or early 2021, it should be virtual. Ms. Scott suggested they look at a timetable with a virtual convening taking place in February- March 2021.

Mr. Mitchell said he was under the impression the convening was actually the event that would kick-start this process with the team developing the design, followed by the design process and the professional development piece and the creation of the final booklet. He suggested rather than wait till February or March 2021 to have the convening, and then scramble to put everything together before the grant ends next year, have it in the fall of 2020, allowing for plenty of time to complete all the tasks. Ms. Chang asked again for any members who could donate some time to join this convening taskforce. Chair Newburn suggested that since some of the subcommittee members are absent from this meeting, and may have an interest, she should send out an email requesting help and membership in that taskforce. Mr. Brancamp suggested that because there is a potential Computer Science Summit already scheduled for October 2020, it may be better to look at dates in November for the convening. Chair Newburn agreed and suggested waiting until after the November 2020 elections.

Mr. Mitchell asked for details on the upcoming Computer Science Summit in the fall of 2020. Ms. Chang said it is scheduled for October 24 -25, 2020. She added the purpose is professional development for educators. She said the original plan was to have one summit in Reno for Northern Nevada to attend and one in Las Vegas for Southern Nevada. She said the summit in Reno, which was before COVID-19, already took place and went really well, but the Las Vegas summit, which was schedule for May 2020 did not take place and was moved to October 2020. She said the Regional Professional Development Program (RPDP) participated with the Reno summit and now Southern Nevada RPDP will assist with the Las Vegas summit. She added that RPDP has multiple trainings at the end of this month and will wait until they complete that training before she addresses the summit with them. Mr. Mitchell suggested they plan on late November or early December 2020 for the convening, allowing for plenty of time to take care of the preparations, then put together the deliverables in January 2021 for a delivery date in the springtime to ECEP. He said if things are looking better next spring, then administrators' trainings can commence, in one form or another, in early June 2021. He asked if everyone agreed that should be the timeline information in the amendment to ECEP. The group agreed. Ms. Chang suggested they start the teacher trainings in late-spring since schools, unless they change their calendars, will be out by the end of May. Mr. Mitchell said he can write the amendment to ECEP and submit on behalf of the subcommittee. He also requested the names of people interested in working on the virtual convening and what it should look like. Ms. Chang said she would modify the dates and platform on the existing flyer for the convening.

Ms. Chang commented on recent virtual national conferences she had attended and how well they were done and were very effective. Chair Newburn said it is still an unknown whether virtual meetings will continue through the year in regards to the pandemic. Ms. Chang agreed to coordinate with Ms. Petrelli (OSIT) in sending out an email for volunteers to assist in putting together the convening.

6. Discussion on CS Education via Remote Learning and What the Subcommittee Can Do to Assist the Department and Teachers (For possible action)

Chair Mark Newburn

Ms. Chang commented on what the Department of Education is providing and what support is still needed. She said she has created a website to support the Nevada Digital Learning Collaborative project that State Superintendent Jhone Ebert has put her and a colleague in charge of, to collaborate on this effort. The website can be found at: <https://nvdigitalllearning.org/>. She said basically the question is how to support education and how our community and learning happen seamlessly, no matter what phase of the pandemic we are in. She said this includes students having part-time in the classroom, then to online learning, and back to the classroom. She said it is necessary to make sure education is not disrupted when those transitions occur. She said with the collaborative project, there are three main focus areas:

- 1) Digital Divide. She said OSIT has offered services to assist with this effort to school districts and charters. She added that the question is how to address the digital divide to include the “haves” and “have nots.” She referred to the equity piece and how inequities have risen to the top. She pointed out this has become a number one priority, because it is a big area and connectivity should be viewed as a “need,” the same as gas, electric, and water, and not as a “want.” She added that Nevada students depend on this.
- 2) Professional Development (PD). She said PD is needed for Nevada educators. She commented that many educators are asking how to do online education effectively, vigorously and in a meaningful way, and how to deliver it so it is engaging for the students. She said even administrators are asking how to evaluate educators in an online setting.
- 3) Curriculum and Support. She said this area of focus is what is available by way of Curriculum and support for teachers and families. She commented that now families are true partners in education in ways that have never been thought of.

Ms. Chang directed the subcommittee to the website (mentioned above) to the topic of Professional Development. She said applications have been sent out statewide to build a team of digital engineers stemming from all areas to include teachers, administrators, principals, IT admin, etc. She commented the teams have been divided into five areas; a team for administrators whose role is to open the school within this climate and provide support for other administrators to bridge those gaps. She said another team is for professional learning and best practices doing research on current outcomes on best practices via online and hybrid models. She said another team is on platforms and digital tools who are creating resources and artifacts, i.e. so parents can log into Canvas, which is an online learning management system, to check on what students are doing and how as a parent, they can support those students. She said another team is working on content and curriculum, building-out content that can go into the Statewide Learning Management System (LMS), Canvas, and building out those resources that can be applied. She said the fifth team is marketing and communications, and will identify how to market to the community to go to this website to gather those resources. She pointed out that people can subscribe on the website and receive notifications of those resources.

She stated that Canvas and the State have entered into a 2-year contract to include approximately 200,000 subscriptions and will add more next year. She said this first year the focus is on grades 6-12 to provide a paid for platform for districts and charters that want to opt in, but is not required. She said this is just another way to provide tools to those that want them. She said next year Canvas grades K-5 subscriptions will be

brought on to help with support. She said Canvas has also contracted with Discovery Education which is a resource open to everyone, whether they use Canvas or something else. She added not only does Discovery Education have content in all subject areas, but also professional development for educators.

Ms. Chang said the question is how can this subcommittee support the State in helping with school districts in these efforts. Dr. Stefik commented that higher education also uses Canvas as a platform, but it is optional, they also use Webex, however it is not accessible to people with disabilities. Ms. Chang pointed out the Nevada Digital Learning website is being mindful on their resources provided by using close captioning on video recordings, pdf documents are all ADA compliant, etc., and the entire website can be translated into numerous languages. She said with Canvas and in working with all school districts in the state the hope is to provide a sharing mechanism.

Chair Newburn commented that much of Nevada's RPDP professional development has been around Code.org and asked whether this is something that Code.org supports, and are they going to be moving into an online deliverable form. Dr. Stefik commented that without thoroughly evaluating it, he does believe they are providing online material, and responded that yes, Code.org is moving in that direction. Chair Newburn asked whether Code.org can be linked to Canvas and have their content loaded into the system since so many teachers have already been trained on that material, and then add Code.org as a resource on the digital collaborative website. Dr. Stefik added that Code.org material is accessible to grades 9-12 only, grades K-8 material is not yet accessible. Ms. Chang said the digital engineering group will be provided with this information. She said the half-credit course required for graduation has been provided to her to upload into the Canvas system and will be available as a resource in the fall. She added that others are working on CS Principles and suggested that Ms. Scott speak with the Career and Technical Education (CTE) pathway people. Ms. Scott said she does not have a green-light to begin that work, but believes the Computer Science Teachers Association (CSTA) would be a great resource to ask, as an association, to assist in building framework. Ms. Chang said she could reach out to Nevada's CSTA chapter regarding building on-line resources, as well as Nevada ECEP teams and see if other states would be willing to share information. She added the problem would be that other states are not completely aligned to Nevada standards, but at least it would give insight on what other states are doing.

Dr. Stefik commented that at UNLV a considerable number of his students do not have access to even very basic internet, which prompted him to look at where Nevada was in regards to student internet access, and compared to others, believes Nevada is not doing very well. He proposed, for consideration to the subcommittee, changes to two laws, that might impact Nevada students' ability to get internet access. Specifically, he said, he believes appealing NRS 710.147 and NRS 268.086 should be considered. He said those two laws prevent cities and counties from participating in the sale of any kind of internet services. He said he does not agree with this, especially in the age of COVID-19. Mr. Mitchell replied there are several avenues for students to get connected and feels that repealing those two NRS's would be extremely difficult, and if appealed may not even achieve the ultimate goal. He said in the short-term students can be directed to, especially at the college level, Lifeline, a federal program where if qualified through a

program, i.e. Free and Reduced Lunch or SNAP, Lifeline provides a \$10 per month bill credit for either a mobile or residential broadband service. He added that many major carriers in Las Vegas offer discounted home internet plans in the amount of \$10 per month. Dr. Stefik asked whether it is possible to talk to a senator about those two laws and suggested this be an agenda item for the subcommittee to at least investigate, which may be beneficial to computer science. Chair Newburn suggested a phone conversation between Dr. Stefik and Mr. Mitchell for further discussion on this topic. Ms. Scott commented that she believes that even though those discounted programs exist, they are not highly marketed, or easy to obtain and believes that is a part of the issue. Mr. Mitchell agreed these are all really good points and added that problems with connectivity, whether they be price, availability of high-speed internet service, or the means to get there, etc., is probably outside of the charge of this subcommittee, but he is certainly willing to have a conversation regarding ways to improve connectivity outside of this subcommittee. He added the subcommittees' focus is more of how to help students who are learning at home to be able to have the same education or experience and be able to master the same content in computer science whether they are learning in person or learning virtually. He suggested the focus remain on how professional development can be provided to teachers for computer science or how course materials can be provided in a way that is accessible to students where ever they are learning. Chair Newburn commented that this issue is currently being brought up in almost every school board meeting and is a big subject with many concerns especially for grades K-12. Ms. Chang added that with the COVID-19 pandemic, computer science education has now come to the top, along with integrated technology, because teachers and students need those standards to work with. She asked whether, at the university level, there are resources that could be supportive in these efforts, i.e. teaching PD online, grad students working on cohorts, some sort of sharing of resources, etc. She added it would be really good information to send out to our CSTA chapter. She agreed it is difficult to get a good solid education coding in an online environment. The group further discussed online collaboration.

7. Discussion on the Upcoming 2021 Legislative Session for the STEM Advisory Council and Anticipated Legislative Actions (For possible action)

Chair Mark Newburn
Brian Mitchell

Chair Newburn commented that at the time this agenda was prepared, it was not anticipate a special session would be taking place and is now currently happening. He said the legislature is attempting to cut approximately one-quarter of the State's budget in which both K-12 education and higher education are getting hit pretty hard. He pointed out this item was intended for discussion on potential bills to submit in the 2021 Legislative Session and what this subcommittee might seek, whereas now it may be important to seek whatever is lost during the special session. He said much of the funding in SB313 (teacher training) has been swept away. Ms. Chang added that all of the remaining funding for SB313 in FY20 is gone and all of FY21 is also gone.

Chair Newburn suggested the number one item on the "ask-list" during the 2021 Legislative Session would be to request back what is lost during this special session. He added that in the past, Code.org and ECEP were asked for next steps to get ideas of what

might be future endeavors for this subcommittee. Mr. Mitchell agreed and suggested looking into the area of computer science policy asks. Chair Newburn pointed out that another consideration is that Senator Woodhouse has termed-out and will not be available next session to be a bill sponsor. He said Senator Moises Denis may be a possibility, as he had his own computer science bill last session. He added that Senator Dallas Harris actually has a BA in Computer Science from UNLV and may also agree to be a bill sponsor for the subcommittee. Mr. Mitchell said that Senator Woodhouse has suggested Senator Harris as a good option for someone who might carry the torch on behalf of the subcommittee. He suggested putting out a survey to computer science teachers asking what they may need in order to be successful, which may provide some ideas and prove to be valuable information to back the subcommittee's requests.

Ms. Chang agreed and said the RPDP's computer science training, highly focusing on K-5, will be reconnecting with teachers that have trained, and have offered to reach out to those teachers for information. She pointed out that RPDP may already have that data with teacher advocacy which includes requests for additional needs, as well as with districts to see what their needs are. She said, on this topic, she received an email from Code.org reporting that in the 2020 State of the States Report, and through their calculations, Nevada is at 64% of high schools teaching at least one foundational computer science course, and she is requesting additional details and breakdowns of that information. She added that to help support their efforts in putting this data together, she has reached out to the RPDP's to reach out in their regions to school districts and charters to report school by school what they are teaching. She said she would aggregate this information and provide it to the subcommittee for the next meeting, which will also be good information to back any bill requests presented to the legislature. Mr. Mitchell agreed this information would be beneficial to both quantifying the need and making the ask very specific, ultimately making the ask much stronger.

Ms. Chang said regarding Code.org policies, Nevada has met all of them, and at the last Expanding Computing Education Pathways' (CSEdCon) summit, which took place in Las Vegas in September 2019, she and Chair Newburn actually sat with that taskforce discussing whether to add to those policies or enhance them, which ultimately it was decided to enhance them. She said not only at a higher education level is computer science training included with your pre-service teachers, but outcomes and data are also shown, building them out to make them fuller rather than adding to the list.

Ms. McCune said her idea would be to focus on equity and pointed out professional development is not only for administrators but for teachers and resources for equitable instruction and access in computer science. She said she also would like to work with the gaps that exist between Code.org's K-5 programs that include CS Fundamentals and the state standards. She pointed out there are so many gaps that teachers who have participated in the fundamentals' trainings within the last two years stopped using it after one year. She said a lot of money is funneled to training those teachers, but there is not a lot of sustainment. Ms. DeLemos agreed. She discussed teacher training in Las Vegas by RPDP, who is doing a great job and making great progress, but with so many teachers it is very difficult for them to circle back to teachers' additional training, which causes gaps, which you do not want. She added that even a small ask on this item might be beneficial. Ms. Chang made the suggestion that with this current platform and some of

these tools, trainings could be recorded and repository training resources could be made to reach more teachers and administrators. Ms. DeLemos said she believes the timing for something like this is perfect and is absolutely what needs to be done in education to get resources out quicker and to wider audiences.

8. Reports from the Subcommittee (For possible action)
Chair Mark Newburn

There were no reports.

9. Future Agenda Items (For discussion)
Chair Mark Newburn

Chair Newburn said for future items discussed, we have the Computer Science Summit, ECEP taskforce, and follow up on the special session of the legislature.

10. Public Comment (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)
Chair Mark Newburn

There were no public comments.

11. Adjournment
Chair Mark Newburn

Chair Newburn adjourned the meeting at 3:33 p.m.